

GLOSSARY

This glossary defines commonly used telecommunication industry terminology that may also be found in this manual.

ABANDONED CALL – a 9-1-1 call in which the person who has dialed 9-1-1 hangs up before the PSAP call taker answers the call.

ACD – See Automatic Call Distribution

ADA – See Americans with Disabilities Act

ADVANCED MOBILE PHONE SERVICE – The original analog mobile phone technology. As compared to digital service, AMPS service is much less spectrum efficient and less amenable to enhanced digital-based features.

ALEC – See Alternative Local Exchange Carrier

ALI – See Automatic Location Identification

AMPS – See Advanced Mobile Phone Service

ALTERNATE ANSWERING – a feature available with E9-1-1 that provides a key at the transferred to PSAP that causes the calls to be routed to the alternate PSAP on the same E9-1-1 system.

ALTERNATIVE LOCAL EXCHANGE CARRIER – competitive telephone carriers providing local telephone service in territory that was previously the exclusive domain of one of the Incumbent Local Exchange Carriers.

AMERICANS WITH DISABILITIES ACT – a federal law that contains, among other things, both general and specific requirements applicable to telephone emergency services.

ANGLE OF ARRIVAL – A network-based wireless location technology that determines a mobile caller's location by measuring and comparing the angles signals are received at from multiple antennae on a cell site.

ANI – See Automatic Number Identification

ANSWERING POSITION – a telephone station or console within a PSAP that answers incoming 9-1-1 calls.

AOA - See Angle of Arrival

AUDIBLE SIGNAL – a "sound" indicating an incoming call to an answering point.

AUTOMATIC CALL ROUTING – See Selective Routing.

AUTOMATIC CALL DISTRIBUTION – equipment that distributes incoming calls to available answering positions in the order they are received. If all positions are busy, ACD systems will “store” calls until an answering position is available.

AUTOMATIC LOCATION IDENTIFICATION – a feature that identifies and displays, at the PSAP, the address/location of a telephone originating a 9-1-1 call.

AUTOMATIC NUMBER IDENTIFICATION – a feature that identifies and displays the exchange telephone number of a telephone that originates a 9-1-1 call.

BASE RATE – the basic costs for telephone services within an exchange (i.e. a main telephone line, auxiliary line, or trunk line services). Other special charges, such as mileage, may be added to a base rate.

BASE RATE AREA – a portion of a telephone exchange area where services of various grades are offered at base rates without mileage or other special charges. Rural telephone line services are not included.

CAD – See Computer-Aided Dispatch.

CALIFORNIA PUBLIC UTILITIES COMMISSION – state regulatory organization that regulates and monitors Common Carriers operating within California.

CALL ASSOCIATED SIGNALING – A methodology for delivering FCC 94-102, Phase I data elements (both ANI and P-ANI) over the same circuitry as the 9-1-1 caller's voice. Usually, CAS solutions require upgrades to E9-1-1 network (from CAMA signaling protocols) and customer premise equipment (to accommodate the 20 digits needed for the ANI and P-ANI).

CALL DETAIL RECORDING – a feature of E9-1-1 service which provides a hard copy record of incoming calls, including ANI, trunk number, time of call seizure, time of answer, time of transfer and time of termination.

CALLERS TELEPHONE NUMBER – The telephone number of the person making the telephone call.

CALLED PARTY HOLD – a hold feature that allows a PSAP call taker to maintain control of an incoming 9-1-1 call for tracing or confirmation of an emergency.

CALNENA – California Chapter of the National Emergency Number Association (NENA)

CAMA - See Centralized Automatic Message Accounting

CAS – See Call Associated Signaling

CATHODE-RAY TUBE – the "display screen" for ANI/ALI etc.

CDMA – See Code Division Multiple Access

CELLULAR SERVICE – See Wireless Services

CENTRAL OFFICE (CO) – the smallest subdivision within the telephone switching system. It serves relatively permanent geographic areas which may use more than one telephone number prefix. A Central Office is sometimes called a "wire center".

CENTRAL OFFICE AREA – the area that receives regular telephone services from a particular central office.

CENTRAL OFFICE IDENTIFICATION – a method of identifying calls coming into a PSAP from a particular Central Office. See Dedicated Facility.

CENTRALIZED AUTOMATIC MESSAGE ACCOUNTING – An in-band multi-frequency (MF) signaling protocol used extensively throughout E9-1-1 networks in the United States to deliver the ANI of the 9-1-1 caller from the local central office to the selective router and/or PSAP. The CAMA signaling protocol is limited to 8-digits. A number plan digit (NPD) is used to encode the area code of the caller so that a full 10-digit number can be displayed at the PSAP.

CHP – California Highway Patrol

CLEC – See Competitive Local Exchange Carrier

COAM – See Customer Owned and Maintained

CODE DIVISION MULTIPLE ACCESS – A digital wireless air interface technology that spreads the transmission of all users in parallel across a wide band of frequencies. CDMA is one of newer air interfaces spreading rapidly in the United States and throughout the world.

COIN FREE DIALING – See Dial Tone First.

COMPETITIVE LOCAL EXCHANGE CARRIER – See Alternative Local Exchange Carrier

COMPUTER-AIDED DISPATCH – a system designed to support public safety agencies in responding to requests for service. It reduces many time consuming call taking, dispatching, communication, deployment and unit status recording activities.

CONFERENCE TRANSFER – a feature allowing a PSAP call taker to remain on an incoming call after it has been transferred to an appropriate agency, creating a three-way conversation.

CONTIGUOUS AGENCY – a public agency whose area of responsibility shares a common jurisdiction boundary.

CPE – See Customer Premises Equipment

CPUC – See California Public Utilities Commission

CRT – See Cathode Ray Tube

CTN – See Callers Telephone Number

CUSTOMER OWNED AND MAINTAINED – purchased telephone equipment that is not subject to recurring telephone company charges.

CUSTOMER PREMISES EQUIPMENT – terminal equipment supplied by an equipment service provider and resides on a customer's premises.

DATA MANAGEMENT SYSTEM – the DMS maintains the 9-1-1 data base for selective routing of 9-1-1 calls to the proper PSAP and provides ALI retrieval.

DDD – See Direct Distance Dialing

DMS – See Data Management System

DEDICATED FACILITY – a telephone circuit assigned exclusively for 9-1-1 operation.

DEFAULT ANSWERING – answering at a specific alternative PSAP when the intended PSAP cannot be determined in selectively routed systems due to ANI failure, garbled digits or other causes.

DIAL TONE FIRST – a feature enabling pay telephones to dial 9-1-1 calls without depositing a coin. (Some privately-owned coin telephones may not have this feature.)

DIRECT DISTANCE DIALING – long distance calls made by a customer in which operator assistance is not used.

DIRECT DISPATCH METHOD – an operational procedure where call answering and dispatching is done by the call takers at a single Public Safety Answering Point.

DIRECTORY NUMBER CALL FORWARDING – a feature that forwards telephone calls to a particular directory listed telephone number to an alternate telephone number.

DNCF – See Directory Number Call Forwarding

EAS – See Extended Area Service

ELECTRONIC SWITCHING SYSTEM. – a telephone switch which uses electronics or computers to control the switching of calls, their billing and other functions.

EMERGENCY SERVICE NUMBER – numeric routing code assigned to each working telephone number that is used to determine the selective routing of 9-1-1 calls to the responsible PSAP.

EMERGENCY SERVICES ROUTING DIGITS – A string of digits sometimes referred to as a P-ANI which uniquely identifies a cell site/sector in a CAS implementation of Phase I service. An ESRD can be a 10-digit, 8-digit, or 7-digit non-dialable number, depending on E9-1-1 network capabilities.

EMERGENCY SERVICES ROUTING KEY – A string of digits assigned by a wireless carrier to carry all the information needed to satisfy FCC Order 94-102. An ESRK is associated with an NCAS implementation of wireless E9-1-1, which can utilize the capabilities of existing E9-1-1 networks without significant modifications.

EMERGENCY SERVICES ZONE – An area of a city, town, or county where the emergency service providers (police, fire and medical) are the same throughout. ESZs are established by ILECs working in conjunction with E9-1-1 county coordinators. ESZs are associated with ESNs for routing purposes.

EMF – See Enhanced Multi-Frequency

E9-1-1 – See Enhanced 9-1-1

ENHANCED 9-1-1 – an expanded or Enhanced 9-1-1 system characterized by the use of selective routing, ANI, and ALI. The successor system to what was known as Basic 9-1-1 (B9-1-1) which is no longer deployed in California.

ENHANCED MULTI-FREQUENCY – An in-band signaling protocol that allows for the delivery of a full 20-digits (ANI and P-ANI) from the selective router to the PSAP. EMF trunks are typically installed where CAS methodologies are used for wireless E9-1-1.

ESN – See Emergency Service Number

ESRD – See Emergency Services Routing Digits

ESRK - See Emergency Services Routing Key

ESS – See Electronic Switching Systems

ESZ – See Emergency Services Zone

EXCHANGE – a defined telephone service area that has one or more Central Offices. Calls within an exchange are local calls.

EXTENDED AREA SERVICE – a telephone service that allows subscribers within an exchange area to pay flat or measured monthly rates in lieu of standard usage charges for calls to other nearby exchange areas.

FORCED DISCONNECT – the capability of the PSAP to disconnect any 9-1-1 call, in the event of abuse.

FEX – See Foreign Exchange Service

FOREIGN EXCHANGE SERVICE – provides local telephone service from a central office which is outside (foreign to) the subscriber's exchange area.

GENERAL SERVICES – California Department of General Services.

GLOBAL POSITIONING SYSTEM – A system that uses various satellites to ascertain the location of a subject with a high degree of accuracy.

GLOBAL STANDARD METRIC – A digital wireless air interface widely used in Europe that is also established in the United States.

GPS – See Global Positioning System

GSM – See Global Standard Metric

ILEC – See Incumbent Local Exchange Carrier

INCREMENTAL COSTS – any non telephone service and equipment costs necessary to implement or operate a 9-1-1 system approved by the State 9-1-1 Program.

INCUMBENT LOCAL EXCHANGE CARRIER – one of the existing Local Exchange Carriers that historically has been providing local telephone service in each of their respective filed territories.

INP – See Interim Number Portability

INTERCEPT – a call which cannot be completed by the switching equipment (for other than a busy condition) and is routed to either a recorded announcement or an operator.

INTERIM NUMBER PORTABILITY – a term used to describe the temporary regulations that allow limited number portability.

JOINT POWERS AGREEMENT – a governmental entity that is created to provide various levels of emergency response services to multiple agencies in lieu of those agencies individually providing the services themselves.

KEY TELEPHONE SYSTEM – a system comprised of telephone instruments for accessing one of several lines by depressing the button (key) associated with a particular line.

KTS – See Key Telephone System

LOCAL TELEPHONE SERVICE AREA – an area within which calls can be made without incurring long distance, multi-message, or zone charges.

MASTER STREET ADDRESS GUIDE – the computer record that lists the standard street names, address ranges, and routing codes used in the Data Management System of an E9-1-1 system equipped with Selective Routing, ANI and/or ALI.

MESSAGE UNIT – a unit of measurement for local telephone use based upon time and distance.

MOBILE SWITCHING CENTER – A wireless central office that controls switching and other functions needed for wireless service. MSCs connect wireless subscribers to the PSTN. In a Wireless E9-1-1 implementation, MSCs would typically connect to the ILECs selective routers in order to gain access to the landline E9-1-1 network infrastructure.

MSAG – See Master Street Address Guide

MSC – See Mobile Switching Center

NATIONAL EMERGENCY NUMBER ASSOCIATION – In 1982, this not-for-profit corporation, was founded to further the goal of “One Nation, One Number”, create industry awareness of 9-1-1 and collect information on emergency number systems currently in use.

NCAS – See Non-Call Associated Signaling

NENA – See National Emergency Number Association

NETWORK – the interconnection of a series of points by a communications system.

NIGHT TRANSFER – an optional feature available with E9-1-1 that provides a key at the primary PSAP to “busy out” the 9-1-1 lines and cause the calls to be routed to another pre-designated PSAP on the same E 9-1-1 system. This arrangement is used by part-time PSAPs to ensure 24-hour operation.

NO COIN DIALING – See Dial Tone First

NON-CALL ASSOCIATED SIGNALING – A methodology of delivering wireless E9-1-1 service over existing E9-1-1 networks without making major modifications to either the network or the CPE. NCAS solutions encode the wireless caller’s callback number, location, and routing information into an 8-digit ESRK to be delivered with the call, and use the existing ALI circuits to deliver this information to the PSAP.

NONPUBLISHED NUMBER – a telephone number which is not listed in any telephone directory or in Directory Assistance records available to the general public.

NPA – See Numbering Plan Area.

NUMBERING PLAN AREA – commonly referred to as area code.

NXX – a three digit code to identify the local central office in which N represents any digit from 2 to 9 and X is any digit. NXX means the first three digits of a North American local telephone number and is commonly referred to as a “prefix”.

OAI – See Open Access Interconnect.

OPEN ACCESS INTERCONNECT – a term used to describe the entrance of multiple local telephone companies doing business in the same neighborhood.

P.01 GRADE OF SERVICE – an engineering expression of the grade of service that indicates the number of busy signals expected to be encountered in 100 call attempts. (P.01 = one busy signal per 100 attempts.)

PABX – Private Automatic Branch eXchange - a switching system on the customer's premises for internal calling and access to the outside telephone network.

P-ANI – See Pseudo Automatic Location Identification

PARTICIPATING AGENCY – a public safety agency which provides emergency services and participates in a 9-1-1 system.

PBX – See PABX

PCS – (Personal Communications Services) See Wireless Services

PDE – See Position Determining Element

PERSONAL COMMUNICATIONS SERVICES – See Wireless Services

POSITION DETERMINING ELEMENT – A term referring to the system element used to identify a wireless 9-1-1 caller's location in a Wireless E9-1-1 system. Typically, a PDE would be used to add Phase II functionality to a Phase I implementation by capturing the coordinates of the caller (within specified FCC accuracy requirements) thereby allowing the location information to be communicated to the PSAP.

PRIMARY PSAP – a public safety agency to which 9-1-1 calls are *directly* routed through the 9-1-1 network.

PSAP – See Public Safety Answering Point

PSEUDO AUTOMATIC LOCATION IDENTIFICATION – A 10-digit non-dialable number used for routing wireless 9-1-1 calls and identifying cell site/sector information in a wireless E9-1-1 implementation. Generally, both ESRDs (in CAS implementations) and ESRKs (in NCAS implementations) are considered to be P-ANIs.

PSTN – See Public Switched Telephone Network

PUBLIC AGENCY – any state, city, county, city and county, district, municipal corporation, joint powers authority, or other public entity located entirely or in part within the State of California which provides or has the authority to provide emergency services.

PUBLIC SAFETY AGENCY – a public agency or functional division of a public agency that provides police, fire, medical, or other emergency services.

PUBLIC SAFETY ANSWERING POINT – a communications center responsible for answering incoming 9-1-1 calls.

PUBLIC SWITCHED TELEPHONE NETWORK – Refers to the networks typically used for the routing of non-emergency call traffic by public telephone companies. By comparison, landline 9-1-1 traffic is generally routed off-net (into the E9-1-1 network) comprised of E9-1-1 selective routers and databases originally designed to serve landline emergency call traffic.

REFERRAL METHOD – a procedural method by which a PSAP refers a caller to a secondary telephone number in non-emergency cases.

RELAY METHOD – a procedural method by which a PSAP gathers information from a 9-1-1 caller and then verbally relays that information to the appropriate public agency for action.

SECONDARY PSAP – a public safety agency to which 9-1-1 calls are *transferred* from a primary PSAP.

SELECTIVE ROUTING – a feature that automatically routes a 9-1-1 call to the proper PSAP that serves the jurisdiction of the calling party irrespective of telephone company wire center boundary alignments.

SELECTIVE TRANSFER – a single button transfer arrangement whereby the appropriate agency to which a call is transferred is predetermined by the programming of the E9-1-1 switching equipment.

SS7 – See Signaling System Seven

SIGNALING SYSTEM SEVEN – An out-of-band digital signaling protocol developed by the telephone industry in order to provide call set-up, ringing, ringback, call billing, and other necessary functions without using voice path circuitry. SS7 is used extensively in both landline and wireless public telephone networks.

SUBSEQUENT AGENCY – any participating agency that receives 9-1-1 calls by transfer or relay from a PSAP rather than direct dispatch. (e.g., fire and medical response agencies animal control, Department of Fish and Game, suicide prevention and poison control).

SWITCHED NETWORK – A system that automatically routes communications between the calling and called person or between data equipment.

TDD/TTY – See Telecommunications Device for the Deaf and Telecommunications Type.

TDMA – See Time Division Multiple Access

TDOA - See Time Difference of Arrival

TELECOMMUNICATIONS DEVICE FOR THE DEAF (TDD) AND TELECOMMUNICATIONS TYPE (TTY) – terms used to describe communications devices used by the hearing impaired and/or speech impaired in order to communicate via the telephone network.

TELECOMMUNICATIONS DIVISION – a Division within the California Department of General Services that is responsible for coordinating the implementation and administration of 9-1-1 systems pursuant to Government Code Sections 53100 et seq.

TIME DIFFERENCE OF ARRIVAL - A network-based wireless location technology that determines a mobile caller's location by measuring and comparing the differences in a caller's signal arrival times received at various cell sites.

TIME DIVISION MULTIPLE ACCESS – A digital interface widely used by wireless carriers in the United States and other countries. TDMA divides voice channels digitally into time slots to make efficient use of a limited radio bandwidth.

TRANSFER METHOD – a procedural method where the PSAP determines the proper responding agency and transfers the 9-1-1 call to that agency.

TRUNK – a line or channel between two central offices or switching devices, (i.e., PABX or PBX equipment), that is used to provide telephone connections between subscribers.

UNLISTED NUMBER – See Nonpublished Number.

WIRE CENTER – a telephone company building that contains one or more central offices.

WIRELESS SERVICE PROVIDER –A company providing radio phone service in either the cellular band or PCS band of spectrum. Also referred to as CMRS (commercial mobile radio service), these carriers are subject to the terms of FCC Order 94-102.

WIRELESS SERVICES – a two way voice and data communications system using analog and/or digital radio frequency technology which includes cellular services, Personal Communications Services (PCS) and Commercial Mobile Radio Services (CMRS).

WSP - See Wireless Service Provider

ZUM – See Zone Usage Measurement.

ZONE USAGE MEASUREMENT – A measurement for charging local calls based on distance, duration of call, time that a call is placed, and the number of calls made.